Access DB# 2770 7

SEARCH REQUEST FORM

Scientific and Technical Information Center

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	1. 77/34 Date: 4/14/00 Tumber: 09/252-628 eferred (circle): PAPER DISK E-MAIL
If more than one search is submitted, please prioritize searches in	n order of need.
Please provide a detailed statement of the search topic, and describe as specifically as Include the elected species or structures, keywords, synonyms, acronyms, and registrutility of the invention. Define any terms that may have a special meaning. Give exaknown. Please attach a copy of the cover sheet, pertinent claims, and abstract.	y numbers, and combine with the concept or
Title of Invention: Recombinant biologically act Pellucida Proteins 3 (142P3) to 1854 of Inventors (please provide full names):	now Ferhling
Ke-wen Dong, Sergio Ochninger, W Earliest Priority Filing Date: 2/19/98	The state of the s
For Sequence Searches Only Please include all pertinent information (parent, child, divided appropriate serial number.	gional, or issued patent numbers) along with the Point of Contact Mone Smith
Please search seguncio. Seg ID Nos 1-4	Technical Info. Specialist CM1 12C14 Tet: 308-3278
seg. 10 No.1 is being cla	med.
- See attached claims, data relevant pages of specification	sheet ond
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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Apr 28 14:27:17 2000; MasPar time 3.79 Seconds 256.177 Million cell updates/sec

Tabular output not generated.

Description: Perfect Score: Sequence: Title:

>US-09-252-828-1 (1-41) from US09252828.pep 325 1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41

Scoring table: PAM 150 Gap 11

Searched: 188963 seqs, 23686106 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: a-geneseq36 1:geneseqp

Statistics: Mean 23.819; Variance 80.040; scale 0.298

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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`	Human zona pellucida 3	Rabbit zona pellucida	Rabbit ZPC protein.	Brushtail possum 2P-3	Bovine ZPC protein.	Bovine zona pellucida	Porcine ZPC protein.	Porcine zona pellucida	Porcine zona pellucida	Pig PZP-3.	Partial porcine zona p	Mouse ZP3 gene product	CZP-3.	Feline ZPC protein.	Feline zona pellucida	Feline zona pellucida	Feline zona pellucida		Canine zona pellucida	Marmoset ZP3.		M. cynomolgus ZPC prot	Cynomolgus Monkey zona		Description		
	1.83e-04	1.49e-05	1.496 - 05		.47e	.47e-	.73e	6.73e-09	.73e-		6.73e-09	.78e-	.51e-			.51e-	8.51e-13		.81e-	1.29e-19	4	2.30e-	2.30e-25		Pred. No.		

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1.83e-04 9.88e+00 1.53e+0: 1.53e+0: 1.91e+0: 2.94e+0) 5.59e+0: 5.59e+0: 6.91e+0: 6.9	Sequence of von Willeb	Acetylcholine receptor	Acetylcholine receptor	GST/GI transport recep	SB5	strain SB5 Cont	Arabidopsis thaliana g	acetyl	Kaposi's sarcoma assoc	sarcoma a	adenovirus		Chicken acetylcholine	Streptococcus pneumoni	Human mature von Wille	Addition sequence used	Caspase activated nucl	Human pemphigus vulgar	Pemphigus vulgaris ant	pellucida	pellucida	ZP-3	
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ALIGNMENTS

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Best Local Similarity
Matches 37; Conser
                 Human zona pellucida protein ZP3 and fragments - useful as contraceptive vaccines or diagnostic medical kits Claim 3; Fig 2; 32pp; English.

The protein sequence was deduced from the nucleotide sequence of zona pellucida ZP3 obtd. by screening a human genomic EMBL3 library, with a labelled ZP3 probe. The human gene was found to comprise 8 exons spread over 20 kb genomic DNA. CDNA clones were isolated and expressed in CHO cells. Elucidation of the ZP3 sequence will allow proden. of large amts. of the protein by recombinant techniques. The protein and derived polypeptides may be used to prep. an immunocontraception by either active or passive immunisation. The polypeptide and antibodies (and anti-idiotype antibodies) directed to it may be useful in diagnostic kits.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Isolated zona pellucida DNA from different mammals - used to develop products which can be used for vaccination to induce transient infertility or permanent sterility in female mammals Example 12; Column 145-148; 84pp; English.

This sequence represents a Macaca cynomolgus ZPC protein isolated from zona pellucida. This protein can be used in a method for specifically inducing transient infertility or permanent sterility in a host animal by selective vaccination with specific zona pellucida proteins or immunocontraceptively active fragments.
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09-NOV-1992; US-973341.
29-JAN-1993; US-012990.
07-JUN-1995; US-484993.
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17-NOV-1998
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13-AUG-1991; E01538.
27-AUG-1990; EP-2022
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372
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Query Match

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Matches 37; Conservative
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26-MAY-1994: U10851.
06-NOV-1993: US-973341.
09-NOV-1992: US-973341.
29-JAN-1993: US-0112990.
(ZONA-) ZOMAGEN INC.
HAITIS JD. HSU KT, Podd.
WPI: 94-183155/22.
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R55199 standard;
R55199;
31-JAN-1995 (fir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for contraceptive development (Claim 1; Page 15; 27pp; English.
The marmoset ZP3 gene was isolated by PCR from total mamoset using PCR primers corresp. to regions of the human ZP3 gene. (the sperm receptor) is useful as an immunocontraceptive and diagnostic reagent e.g. to detect sperm function, to monitor effects of vaccination, for imaging follicles, to detect ZP3-autoimmune disorders or ZP3-expressing tumours or to screen f
                                                                                                                                             N-PSDB; Q65609.
Use of zona pellucida proteins and antibodies - for inducing reproducible transient infertility or permanent sterility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-JAN-1995 (first entry)
Canine zona pellucida ZPC protein.
Dog; canine; zona pellucida; ZPC;
                                                                Claim 40; Page 92-93; 154pp; English.

A commercially available 16 week old canine ovarian cDNA expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             autoantibodies against ZP3.
Seguence 424 AA;
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library in lambda gtl1 was screened using antibodies raised against heat solubilised canine zona pellucida. The largest candidate clone was used to rescreen the library and to isolate clones which were
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Canis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Marmoset
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R53498 standard;
                                                                                                                                female mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        familiaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
30; Conse:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Koothan T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EP-310026.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        larity 88.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                          /label= canine_ZPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein;
                                                                                                                                                                                                                                                             Podolski JS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 253; DB 1;
Pred. No. 1.29e-19;
4; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 4.00e-25;
1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immunocontraception.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 424;
                                                                                                                                                        for inducing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
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ZP3
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Best Local
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Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Canis sp.
US5837497-A.
US-17-NOV-1998.
07-JUN-1995;
09-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-NOV-1992;
29-JAN-1993;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W81809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   used as probes canine ZPA and respectively). I Sequence 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence represents a canine ZPC protein isolated from zona pellucida. This protein can be used in a method for specifically inducing transient infertility on several transient sterility in a host animal by selective vaccination with specific zona pellucida proor immunocontraceptively active fragments.
                                                                                                                                                                                                                                                                                                                   09-SEP-1994 (first entry)
Feline zona pellucida FZP-3
Cat; feline zona pellucida;
MZP; murine zona pellucida.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Isolated zona pellucida DNA from different mammals products which can be used for vaccination to induce infertility or permanent sterility in female mammals claim 5; Column 78-80; 84pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 99-023447/02.
N-PSDB; V64791.
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Canine ZPC protein.
ZPC; zona pellucida; infertility; sterility; immunocontraceptive;
Claim 3; Fig 4: 19pp: Japanese.
The full-length feline zona pellucida protein can be antigen in the preparation of contraceptive vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      vaccine; canine.
                                                                             DNA encoding cat zona pellucida FZP-3 - useful contraceptive vaccine and for sterilisation
                                                                                                                                                   (TOFU ) TONEN CORP. WPI; 94-061479/08.
                                                                                                                                                                                                                                                                                                                                                                                                                    R60165 standard;
                                                                                                                               N-PSDB;
                                                                                                                                                                                                  29-NOV-1991; JP-342317.
                                                                                                                                                                                                                           27-NOV-1992;
                                                                                                                                                                                                                                                    25-JAN-1994.
                                                                                                                                                                                                                                                                             J06014784-A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ZONA-) ZONAGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   307 WYPVEGSADICRCCNKGSCGLPGRSRRLSHLERGWRKSVS 346
|:||:||:||:||| || || || ||::||| :|:||
2 WFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
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nes 24; Conse
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    h 65.5%;
Similarity 60.0%;
24; Conservative
                                                                                                                               Q56050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          484993.
US-149223.
US-973341.
US-012990.
US-484993.
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R55199 is the G
AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                261 AA
                                                                                                                                                                                                                                                                                                                                                 (amino FZP-3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hybridisations. Sequences coding for were obtained (Q65608 and Q65609, e deduced amino acid sequence for ZPC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 213; DB 1; Le
Pred. No. 6.81e-15;
9; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 213; DB 1; Le
Pred. No. 6.81e-15;
9; Mismatches 7;
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                                                                                                                                                                                                                                                                                                                                              acids 107-369).
antigen; contraceptive vaccine;
                                                                                                      as
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                                                                                                   antigen
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            used as an for cats.
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Best Local S
Matches 2
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Best Local Similarity
Matches 22; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-MAY-1994.
06-NOV-1993;
09-NOV-1992;
29-JAN-1993;
                                                                                            Claim 40; Page 105-106; 154pp; English.
A cDNA library was prepared in lambda gtl0 from mRNA isolat ovaries of 3-4 month old cats. Plaques were screened using mixture of probes encoding porcine ZPA, ZPB and ZPC protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA encoding cat zona pellucida FZP-3 - useful as contraceptive vaccine and for sterilisation claim I; Page 10-12; 19pp; Japanese.
The feline zona pellucida protein can be used as a preparation of contraceptive vaccines for cats.
Sequence 424 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-SEP-1994 (first entry)
Feline zona pellucida FZP-3.
Cat; feline zona pellucida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E47198
R47198;
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Positive clones were analysed further by Southern hybridisation using the porcine probes and clones encoding feline ZPA, ZPB and ZPC proteins were identified. The deduced amino acid sequence
                                                                                                                                                                                                                                                                        Use of zona pellucida proteins and antibodies reproducible transient infertility or permanents.
                                                                                                                                                                                                                                                                                                                                                                            (ZONA-) ZONAGEN INC.
Harris JD, Hsu KT,
WPI; 94-183156/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Feline zona pellucida ZPC protein. Cat; feline; zona pellucida; ZPC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R55202 standard;
R55202;
01-FEB-1995 (fi:
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29-NOV-1991; JP-342317.
(TOFU ) TONEN CORP.
WPI; 94-061479/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
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                                                                                                                                                                                                                                                                                                                                                N-PSDB; Q65612
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27-NOV-1992;
                                                                                                                                                                                                                                           female mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 307 WFPVEGPADICNCCNKGSCGLQGRSWRLSHLHRPWHKMAS 346
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 55.0%; 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     261 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    U10851.
US-973341.
US-012990.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60.0%;
55.0%;
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07-JUN-1995; 484993.

09-NOV-1993; US-149223.

09-NOV-1992; US-973341.

29-JAN-1993; US-012990.

07-JUN-1995; US-484993.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Isolated zona pellucida DNA from different mammals - used to develop products which can be used for vaccination to induce transient infertility or permanent sterility in female mammals Claim 5; Column 99-102; 84pp; English.

This sequence represents a feline ZPC protein isolated from zona pellucida. This protein can be used in a method for specifically inducing transient infertility or permanent sterility in a host animal by selective vaccination with specific zona pellucida proteins or immunocontraceptively active fragments.
The sequence shows a CZP-3 protein which can be used as preparation for a contraceptive for dogs. The CZP-3 gene using primers (Q55425-26) into E.coli. The resulting tra
                                                                                                                                                                                                                                                                                                                                       21-DEC-1993.
15-DEC-1992; 353990.
26-DEC-1991; JP-357671.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Canine; dog; contraceptive; CZP; canine transformant; E.coli; clone.
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05-AUG-1994
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W81812 standard;
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                                                                                                                       Claim 2; Page 11; 17pp; Japanese
                                                                                                                                                             vaccine
                                                                                                                                                                                            Isolated canine zona pellucida CZP-3 -
                                                                                                                                                                                                                                   N-PSDB; Q55424.
                                                                                                                                                                                                                                                                 WPI; 94-051146/07.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                15-DEC-1992; 353992.
15-DEC-1992; JP-353992.
(TOFU) TONEN CORP.
WPI; 94-245693/30.
N-PSDB; T14908.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus.
US7364379-A.
28-AUG-1990
12-JUN-1989; 364379.
12-JUN-1989; US-364379.
(USSH ) NAT INST DIABETES.
Jurrien D;
                                                                                                                                                                                                                                                                                                                                                               28-JUN-1994.
15-DEC-1992;
15-DEC-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Partial porcine zona pellucida 3, PRP-3; porcine zona pellucida 3; c PRP-3; porcine zona pellucida 3; c PRP-3(258); ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      produces
Sequence
Pig zona pellucida-3 related peptide(s) - useful as contraceptive vaccine antigen

Example 1; Fig 1; 14pp; Japanese.

The present sequence is that of recombinant porcine zona pellucida 3

(PZP-3) 258 (R96951). In the specification it is stated that PZP-3(258)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  by inhibituou or recommination risk of birth defects.
Gene product comprises epitope to zona
Gene product comprises expression systems are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mouse ZP3 gene product - of an oocyte by a sperm of an openative; ZP3 prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptide epitope of zona pellucida protein, minimises possibil of birth defects if failed contraception.

Disclosure; Fig 1; 93pp; English.

Vaccine provides long term, non-permanent contraception in machine provides long term, non-permanent contraception long term, non-permanent contraception in machine provides long term, non-permanent contraception long term, non-permanent contraception long term, non-permanent long term, non-permanent long term, non-permanent long term, non-permanent long term, non-perma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R96951;
18-JUL-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T 13
R96951 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sus scrota.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contraceptive antibody vaccine for mammalian female -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; Q06128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jurrien D;
WPI; 90-297734/39.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R07058 standard; protein;
R07058;
18-JAN-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 FPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      h 60.0%;
Similarity 59.0%;
23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .258

/label = PZP-3(258)

/note = "corresponds 1

(R96950)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52.9%;
53.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     epitopic for Ab which inhibits fertilisation m in mammalian female.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 172; DB 1;
Pred. No. 3.78e-10;
9; Mismatches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 195; DB 1;
Pred. No. 8.51e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PZP-3(258).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pellucida protein also claimed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        106-363
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 49.5%;
Best Local Similarity 70.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                        28-JUN-1994.
15-DEC-1992; 353992.
15-DEC-1992; JP-353992.
(TOFU) TONEN CORP.
WPI; 94-245693/30.
N-PSDB; T14894.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA coding pig zona pellucida PZP-3 - prepd. by recombining DNA control base sequence coding (part of)partial aminoacid sequence of PZP-3 to proper replicable expression vector etc. Claim 1; Page 6-7; 13pp; Japanese.

The primers given in 048693-94 are used in the isolation of PZP-3 DNA. Pig zona pellucida PZP-3 is useful as a vaccine antigen for pig contraception or sterility.

Sequence 258 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       corresponds to amino acids 106-363 of the full length PZP-3 (R96950) The PZP-3 gene was isolated from the ovaries of pigs and introduced into suitable host cells for expression. Recombinant PZP-3(258) is expressed by pMAL-C-PZP-3(258) in E. coll JM109. Peptides wholly or partially related to PZP-3, partic, between amino acids 106-363, are
Pig zona peliucida-3 related peptide(s) - useful as contraceptive vaccine antigen vaccine antigen Claim 1; Page 9-10; 14pp; Japanese.

The present sequence is that of porcine zona pellucida 3 (PZP-3). The PZP-3 gene (T14894) was isolated from the ovaries of pigs and introduced into suitable host cells for expression. Peptides wholly or partially related to PZP-3, partic. between amino acids 106-363 (see R99951), are useful as contraceptive vaccine antigens for pigs. See also T14895-908.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TOFU ) TONEN CORP. WPI; 93-260855/33. N-PSDB; Q48695.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sus scrofa
J05176771-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zona pellucida; PZP-3; primer; polymerase chain reaction; PC expression; vaccine; antigen; contraception; sterility; pig.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             77 14
R41004; Standard; Protein; 258 AA.
R41004; O8-FEB-1994 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        useful as contraceptive vaccine antigens for pigs. See also T14894-908. Sequence 258 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-JUL-1993.
29-NOV-1991; 342318.
29-NOV-1991; JP-342318.
                                                                                                                                                                                                                                                                               18-JUL-1996 (first entry)
Porcine zona pellucida 3 (PZP-
PZP-3; porcine zona pellucida
PZP-3(258).
                                                                                                                                                                                                                                               Sus scrofa.
J06179698-A.
                                                                                                                                                                                                                                                                                                                                                R96950 standard; Protein; 420 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pig PZP-3
                                                                                                                                                                                                                                                                                                                                                                                                                                202 WSPVEGPAVICRCCHKGQCGTPSLSRK 228
| | ||:||| ||:||:||:||| ||:
2 WFPVQGPADICQCCNKGDCGTPSHSRR 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  / Match 49.5%;
Local Similarity 70.4%;
nes 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                               (PZP-3).
ucida 3; c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 161; DB 1;
Pred. No. 6.73e-09;
5; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 161; DB 1;
Pred. No. 6.73e-09;
5; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                polymerase chain reaction; PCR;
                                                                                                                                                                                                                                                                                               contraceptive vaccine; antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
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Seguence 420 AA;
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Query Match 49.5%; Score 161; DB 1; Length 420; Best Local Similarity 70.4%; Pred. No. 6.73e-09; Matches 19; Conservative 5; Mismatches 3; Indels 0; Gaps

0

Search completed: Fri Apr 28 14:27:50 2000 Job time: 33 secs.

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Tabular output not generated. Fri Apr 28 14:28:08 2000; MasPar time 2.38 Seconds 223.353 Million cell updates/sec

Description:
Perfect Score:
Sequence: Title:

>US-09-252-828-1 (1-41) from US09252828.pep 325

1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41

Scoring table: РАМ 150 Gap 11

Searched: 131253 segs, 12956647 residues

Post:processing: Minimum Match 0% Listing first 45 summaries

Database:

a-issued 1:5A_COMB 2:5B_COMB 3:PCT9_COMB 4:backfiles1

Statistics: Mean 22.706; Variance 81.406; scale 0.279

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	89	7	9	} _∽	4	ω	2	₽	Result No.
161	172	172	172	172	172	195	195	195	195	213	213	213	213	301	301	301	301	314	314	314	314	314	Score
9	2	2	2	2	2	0	0	0	0	ŗ	5	5	ū		2	2	92.6	9	6	6	σ.	6.	Query Match
421	424	424	424	424	424	424	424	424	424	426	426	426	426	223	223	223	223	424_	424	424	424	424	Length
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COMPUTION APPLIATED APPLIA	equence 7 Sequence Patent No GENERAL APPLIC TITLE TITLE TITLE NUMBER CORRES ADDR ADDR ADDR STRE COTY STAT	1 08-453-	1156 1156 1156 1156 1156 1156 1156 1156
COUNTRY: USA ZIP: 10154 COMPUTER READABLE FORM: MEDIUM TYPE: FLOPPY DIS COMPUTER: IBM PC COMPAT OPERATING SYSTEM: PC-DO SOFTWARE: WORDDERFECT 5 CURRENT APPLICATION NUMBER: US/ FILING DATE: 30-May-199 CLASSIFICATION NUMBER: US/ FILING DATE: 26-MAR-199 PRIOR APPLICATION DATA: APPLICATION UNMBER: US FILING DATE: 20-AUG-199 PRIOR APPLICATION DATA: APPLICATION DATA: APPLICATION UNMBER: US FILING DATE: 12-JUN-198 PRIOR APPLICATION DATA: APPLICATION DATA: APPLICATION UNMBER: US FILING DATE: 12-JUN-198 PRIOR APPLICATION DATA: APPLICATION UNMBER: US FILING DATE: 12-JUN-198 APPLICATION UNMBER: US FILING DATE: 13-JUN-198 APPLICATION UNMBER: 36 REFERENCE/DOCKET NUMBER: 36 REFERENCE/DOCKET NUMBER: 36	7, Applicati 7, Applicat 7, Applicat 7, Applicat 6, 5626846 6, INFORMATION CANT: DEAN, OF INVENTIO OF INVENTIO OF INVENTIO OF SEQUENCE OF SEQUENCE FOR SECUENCE F	472-7	1190.0 120.0 100.0
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RM: PY DISK COMPATIBLE COMPATIBLE PC-DOS/MS- FECT 5.1 DATA: US08/45 35 37 37 38 105 08/03 AR-1993 TA: US 07/93 UG-1992 TA: US 07/93 UG-1992 TA: US 07/36 UN-1989 MATION: AUTH R: 36.434 UMBER: 202 FORMATION:	US/0845347 1 US/0845347 URRIEN CONTRACEE BASED ON POLYPEPT1: 12 ESS: N & FINNEGA AVENUE	ALIGNMENT	US - 08 - US - 0
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TELEX: 421792
INFORMATION FOR SEQ ID NO:

7 :

TELEPHONE:

(212) 758-4800 12) 751-6849

TELEFAX:

SEQUENCE CHARACTERISTICS:

LENGTH:

424

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Matches 39; Conservative
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                                                                                                                                                                                                                                                                                                                                                             US-08-038-948-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PAtentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/038,948
FILING DATE: 26-MAR-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/930,462
FILING DATE: 20-AUG-1992
FILING DATE: 20-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4, Application US/08038948
                                                                                                                                                                                                                                                         Patent No. 5641487 GENERAL INFORMATION:
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                                                                                                                                                                                                       NUMBER OF SEQUENCES: 1: CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                          TITLE OF INVENTION: CONTRACEPTIVE VACCINE BASED ON TITLE OF INVENTION: ALLOIMMUNIZATION WITH ZONA PELLUCIDA POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
ORIGINAL SOURCE:
PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                    STATE: D.C. COUNTRY: U.
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LOCATION:
LDENTIFICATION METHOD:
LDENTIFICATION:
LOTHER INFORMATION:
LNCE 424 AA; 47028 MW; 954880 CN;
LNCE 424 AA; 47028 MW; 954880 CN;
                                                                                                                                                                        CITY: Washington
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TISSUE TYPE:
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STRANDEDNESS: sin
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                                                                                                                                                                                              ADDRESSEE:
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                                                                                                                                                                                 E: CUSHMAN, DARBY & CUSHMAN 1100 New York Avenue, N.W.
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US 07/364,379
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Pred. No. 1.37e-25;
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Matches 3
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SEQUENCE 424 AA;
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TELEFAX: (202) 822-944
TELEX: 6714627 CUSH
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 424 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 7, Application US/08453952
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                                                  PRIOR APPLICATION DATA:
APPLICATION NOWBER: US 08/038,948
FILING DATE: 26-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NOWBER: US 07/930,462
FILING DATE: 20-AUG-1992
PRIOR APPLICATION NOWBER: US 07/364,379
PRIOR APPLICATION NOWBER: US 07/364,379
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MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 26,581
REFERENCE/DOCKET NUMBER: 99
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: CONTRACEPTIVE VACCINE
TITLE OF INVENTION: BASED ON ALLOIMMUNIZATION WITH ZONA PELLUCIDA
TITLE OF INVENTION: POLYPEPTIDES
                                 FILING DATE: 12-JUN-1989 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                            CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                     COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS SOFTWARE: WORDPERFECT 5.1
                                                                                                                                                                                                                                                                 STATE: NEW YORK
                    NAME: DOROTHY R. AUTH
                                                                                                                                              CLASSIFICATION:
                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 30-May-
                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                       STREET:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
REFERENCE/DOCKET NUMBER:
           REGISTRATION NUMBER:
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95.1%;
                                                                                                                                                      UMBER: US/08/453,952
30-May-1995
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Pred. No. 1.37e-25;
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  2026-4032 US4
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Local Similarity 95.1%;
hes 39; Conservative
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INFORMATION FOR SEQ ID NO: 7:
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     CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/
FILING DATE: 07-JUNE-95
CLASSIFICATION: 514
                                                                                                                                                                     TITLE OF INVENTION: Pharmaceutical Compositions TITLE OF INVENTION: Immunocontraception NUMBER OF SEQUENCES: 61
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: protein ORIGINAL SOURCE:
                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (212) 758-4800
                                                                                                                                               ADDRESSEE:
ADDRESSEE:
                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
STRANDEDNESS: sin
TOPOLOGY: unknown
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                                                                                                 COUNTRY: United States of America ZIP: 60606-6402
                                                                                                                              STREET: 6300 : CITY: Chicago
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OTHER INFORMATION: human ZP3 protein
CE 424 AA; 47028 MW; 954880 CN;
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                                                                                                                    Illinois
                                                                                                                                        6300 Sears Tower, 233 South Wacker Drive
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Podolski, J
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Pred. No. 1.37e-25;
1; Mismatches 1
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Best Local Similarity
Matches 39; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            308 SWFPVEGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSAS 348
                                                                                                                                                                                                                                                                                                              Sequence 7, Application US/08862903 Patent No. 5916768
APPLICATION NUMBER: US/08/862,903
FILING DATE: 30-May-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/038,948
FILING DATE: 26-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/930,462
                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                  APPLICANT: DEAN; JU
TITLE OF INVENTION:
TITLE OF INVENTION:
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DESCRIPTION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07
FILING DATE: 09-NOV-92
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FILING DATE: 09-NOV-93
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08
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                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: :
                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                 STREET: 345 PARK
CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: 312/474-66
TELEFAX: 312/474-0448
TELEX: 25-3856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DESCRIPTION: "deduced amino acid sequence of human ZPC" ICE 424 AA; 47028 MW; 954880 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Clough, David W
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
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95.1%;
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                                                                                                                                                                                                                                                                   BASED ON ALLOIMMUNIZATION WITH ZONA PELLUCIDA
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Pred. No. 1.37e-25;
1; Mismatches 1
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MOLECULE TYPE: ORIGINAL SOURCE:

STRANDEDNESS:

single

unknown

protein

amino acid

ORGANISM:

human

DEVELOPMENTAL STAGE

NDIVIDUAL ISOLATE:

INFORMATION FOR SEQ ID NO:

7 :

TELEFAX: 12-TELEFAX: 421792

SEQUENCE CHARACTERISTICS:

ENGTH:

TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849

FILING DATE: 20-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0;
FILING DATE: 12-UUN-1989
ATTORNEY/AGENT INFORMATION:

US 07/364,379

NAME: DOROTHY R. AUTH REGISTRATION NUMBER:

REFERENCE/DOCKET NUMBER:

36,434

2026-4032 US4

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APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                               0,
      383888888888888888888888888888888888
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                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-484-158B-49
                                                                                                                                                                                                                                                                                            Sequence 49, Application US/08484158B Patent No. 5976545 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                            Sequence 49, Application US/08484158B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 107 SWFPVEGPADICQCCSKGDCGTPSHSRRQPHVVSQWSRSAS 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
 CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA;
APPLICATION UNMERE: COMMON TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity nes 37; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO:
                                                                                                                              STREET: 6300 Sears Tower
CITY: Chicago
STATE: Illinois
COUNTRY: United States c
LIP: 60506-5402
                                                                                                                                                                                                                NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                          APPLICANT: Harris Ph.D., Jeffr
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
MOLECULE TYPE: protein
MOLECULE TYPE: 24553 MW; 266656 CN;
                                  APPLICATION NUMBER: US/OFILING DATE: 07-JUNE-95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 31
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 223 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/9
FILING DATE: 09-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 31.,
TELEFAX: 25-3856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Clough, David W. REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 08/0: FILING DATE: 29-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 09-NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : 223 amino acids
amino acid
                                                                                                                                                                      6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                  Harris Ph.D., Jeffrey D.
                                                                                                                                                                                              Marshall, O'Toole, Gerstein, Murray &
                                                                                                                                                                                         Borun
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-NOV-1993
                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                  Pharmaceutical Compositions for Immunocontraception
                                             US/08/484,158B
                                                                 Release #1.0, Version
                                                                                                                                                                                                                           61
08/149,223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07/973,341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 301; DB 2;
Pred. No. 4.11e-24;
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                                                                                                                                           of America
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Matches Query Match Best Local

Local

Similarity 39; Conser

Conservative

96.6%;

Score 314; DB 2; Pred. No. 1.37e-25; 1; Mismatches 1

Mismatches

1; Indels

0,

Length 424;

SEQUENCE

IDENTIFICATION METHOD: OTHER INFORMATION: hu

124 AA; 47028 MW; 954880 CN;

LOCATION NAME/KEY: 2P3 ORGANELLE: TISSUE TYPE:

Sequence 49, Application US/08484993B

Patent No.

SENERAL INFORMATION:
APPLICANT: Harris
APPLICANT: Hsu, Ku
APPLICANT: Podolsk

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402

STREET: 6300 s

6300 Sears Tower, Marshall, O'Toole,

Gerstein, Murray & Borun South Wacker Drive

ADDRESSEE:

Sequence 49,

9, Application US/08484993B 5837497

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US-08-484-993B-49

STANDARD;

PRT;

223

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09-NOV-93

08/012,990

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RESULT
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                                                                                                                                                                                                                                                                                                                                                                          Sequence 49,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            107 SWFPVEGPADICQCCSKGDCGTPSHSRRQPHVVSQWSRSAS 147
                                                                                                                                                                                                                                                                                                                                        Sequence 49, Application US/08484596A Patent No. 5981228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  / Match 92.6%;
Local Similarity 90.2%;
nes 37; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 09-NOV-9;
PRIOR APPLICATION DATA;
APPLICATION UNMER: 09
APPLICATION UNMER: 29-JAN-9;
PRIOR APPLICATION DATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear
MOLECULE TYPE: protein
JENCE 223 AA; 24553 MW; 266656 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 223 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 07/9:
FILING DATE: 09-NOV-92
ATTORNEY/AGENT INFORMATION:
APPLICATION NUMBER: 07/973,341
FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
                                            APPLICATION NUMBER: 08/149,223 FILING DATE: 11-NOV-1993 PRIOR APPLICATION DATA:
                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 32
TELECOMMUNICATION INFORMATION:
                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                            TITLE OF INVENTION: Materials and Methods for Immunocontraception NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                            ZIP:
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TELEFAX: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER:
                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                    STATE:
                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                                                                           RY: United States of America 60606-6402
                                                                                                                                                                                                                Chicago
: Illinois
                                                                                                                                                                                                                                                                                                                                                                          Application US/08484596A
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                                                                                                                                                                                                                                       E: Marshall, O'Toole, Gerstein, Murray & Borun 6300 Sears Tower, 233 South Wacker Drive
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Podolski, Joseph S.
                                                                                                                                                                                                                                                                                                                  Harris Ph.D., Jeffrey D.
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                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
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                                                                                                               US/08/484,596A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 301; DB 2;
Pred. No. 4.11e-24;
3; Mismatches 1
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RESULT
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Best Local Similarity 90.2%;
Matches 37; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 49, Application US/08480150A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  107 SWFPVEGPADICQCCSKGDCGTPSHSRRQPHVVSQWSRSAS 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 49, Application US/08480150A Patent No. 5989550
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
                                                      FILING DATE: 07-JUN-1995

FILING DATE: 07-JUN-1995

FICASSIFICATION 424

PRIOR APPLICATION UNBER: US 08/149,22:
APPLICATION NUMBER: 08/012,990

FILING DATE: 29-JAN-1993

APPLICATION NUMBER: 07/973,341

FILING DATE: 09-NOV-1992

ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: 36,107

REGISTRATION NUMBER: 36,107
                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       μ
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TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                            STREET: Chicago
CITY: Chicago
TNATE: Illinois
Tnited
                                                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/480,150A
                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Materials and Methods for Immunocontraception NUMBER OF SEQUENCES: 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
                                             TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
  TELEFAX: 31-,
TELEFAX: 31-,
TEX: 25-3856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: am:
                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0
          TELEPHONE: 312/4/4-0448
                                                                                                                                                                                                                                                                                                  COUNTRY: United States of America ZIP: 60606-6402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 31745
                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LE TYPE: protein
223 AA; 24553 MW; 266656 CN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amino acid
                                                                                                                                                                                                                                                                                                                                              E: Marshall, O'Toole, Gerstein, Murray & Borun
6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             223 amino acids
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Hsu, Kuang T.
Podolski, Joseph S.
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                                                                                                                                                                       US 08/149,223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 301; DB 2;
Pred. No. 4.11e-24;
3; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49:
49:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
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  Query Match
Best Local Similarity
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Best Local
                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 12, Application US/08484596A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-484-596A-12
                                                                                                                                               PILING DATE: 11-NOV-1993

PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/973,341

FILING DATE: 09-NOV-1992

ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REGISTRATION NUMBER: 36,107

REFERENCE/DOCKET NUMBER: 31745
                                                                                TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO.
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMA
APPLICANT: H
APPLICANT: H
APPLICANT: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 12, Application US/08484596A Patent No. 5981228
                            MOLECULE TYPE: protein
PENCE 426 AA; 47367 MW; 972293 CN;
                                                                                                                             TELECOMMUNICATION INFORMATION: TELEPHONE: 312/474-6653
                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,596A
FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/149,223
FILING DATE: 11-NOV-1993
                                                                                                                                                                                                                                                                                                                                 COUNTRY: United States of America ZIP: 60606-6402
COMPOTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                       TYPE: am:
TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: protein
JENCE 223 AA; 24553 MW; 266656 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 223 amino acids
                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                    STREET: 6300 s
                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 90.2%;
37; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                               amino acid
                                                                                                                                                                                                                                                                                                                                                                            Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid
                                                                         426 amino acids
                                                                                                                                                                                                                                                                                                                                                                                          E: Marshall, O'Toole, Gerstein, Murray & Borun
6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hsu, Kuang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Harris Ph.D., Jeffrey D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inear
  65.5%;
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                                                                                                                                                                                                                                                                                                                                Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                59
Score 213; DB 2;
Pred. No. 3.05e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 301; DB 2;
Pred. No. 4.11e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
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         Length 426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
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Best Local Similarity

Matches 24; Conser
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               307 WYPVEGSADICRCCNKGSCGLPGRSRRLSHLERGWRKSVS 346
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                                                                                     MOLECULE TYPE: protein SEQUENCE ,426 AA; 47367 MW; 972293 CN;
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2 WFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
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                                                                                                                                                                        FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REGISTRATION NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 3174
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
TELEPHONE: 312/474-0448
                                                                                                                             TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 426 amino acids
                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/480,15
FILING DATE: 07-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/149,22
FILING DATE: 09-NOV-1993
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-1993
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                                                                                                                                                                                                                                                                    FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                           TYPE: ami
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MEDIUM TYPE: Floppy disk
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APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Materials
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 6300 :
CITY: Chicago
STATE: Illino:
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                                              Conservative
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                                                        65.5%;
60.0%;
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Materials and Methods for Immunocontraception
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                                             Score 213; DB 2;
Pred. No. 3.05e-14;
9; Mismatches 7
                                                                                                                                                                                                                                                                                                             US 08/149,223
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                                        US-08-484-993B-12
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                                                                                                                                                     307 WYPVEGSADICRCCNKGSCGLPGRSRRLSHLERGWRKSVS 346
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                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                  CLASSIFICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/149,223
FILING DATE: 09-NOV-93
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 08/012,990
                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 32 TELECOMMUNICATION INFORMATION: 312/474-6653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Pharmaceutical Compositions for TITLE OF INVENTION: Immunocontraception
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CTTY: Chicago
TILinoi
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                                                                                                                                                                                                                                                                                                    TYPE: amino actu
TOPOLOGY: linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Clough, David W. REGISTRATION NUMBER: 3
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                                                                                                                                                                                                                                                                        LE TYPE: protein 426 AA; 47367 MW; 972293 CN;
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6300 Sears Tower,
                                                                                                                                                                                                                                                                                                                                                    426 amino acids
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Podolski, J
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                                                                                                                                                                                                               Score 213; DB 2;
Pred. No. 3.05e-14;
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                                                                                            Sequence 18, Application US/08484993B
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                                                                                                                                                                                                                                                                                        Sequence 12, Application US/08484993B Patent No. $837497 GENERAL INFORMATION:
                                      Sequence 18, Application Patent No. 5837497
GENERAL INFORMATION:
APPLICANT: Harris
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INFORMATION FOR SEQ ID NO:
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REFERENCE/DOCKET NUMBER: 31
TELECOMMUNICATION INFORMATION:
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APPLICATION NUMBER:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein GNCE 426 AA; 47367 MW; 972293 CN;
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ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception
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TELEFAX: 25-3856
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CITY: Chicago
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Similarity 60.0%;
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  Harris Ph.D., Jeffrey D
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                                                          US/08484993B
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Pred. No. 3.05e-14;
9; Mismatches 7;
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APPLICANT:

Hsu,

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RESULT
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Best Local :
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                                     Patent No. 5989550
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception
NUMBER OF SEQUENCES: 59
                                                                                                                                                                        Sequence 18, Application US/08480150A
                                                                                                                                                                                                                                                        US-08-480-150A-18
                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                     307 WFFVEGPADICNCCNKGSCGLQGRSWRLSHLDRPWHKMAS 346
                                                                                                                                   Sequence 18, Application US/08480150A Patent No. 5989550
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TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                    2 WFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
       CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole,
STREET: 6300 Sears Tower, 233
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MOLECULE TYPE: protein
JUENCE 424 AA; 46853 MW; 929900 CN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 31745
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448
TELEX: 25-3856
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APPLICATION NUMBER: 07/973,341
FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
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CLASSIFICATION: 424
PRIOR APPLICATION DATA.
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-1993
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CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy
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STREET: 6300 S
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CITY: C
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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22; Conser
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: United States of America
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                                                                                                                                                                                                                                                                                                                                                                         60.0%;
55.0%;
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Iski, Joseph
                                                                                                                                                                                                                                                      STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                        Score 195; DB 2;
Pred. No. 2.92e-12;
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Search completed: Fri Apr 28 14:28:28 2000 Job time : 20 secs.
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                                                                        Query Match
Best Local Similarity 55.0%;
Conservative
                                                                                                                                      SEQUENCE
                                                     307 WFPVEGPADICNCCNKGSCGLQGRSWRLSHLDRPWHKMAS 346
                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/149,223
FILING DATE: 09-NOV-1993
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-1993
PRIOR APPLICATION NUMBER: 07/973,341
                                             N
                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                 MOLECULE TYPE: protein
JENCE 424 AA; 46853 MW; 929900 CN;
                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 424 amino acid
TYPE: amino acid
                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 31
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
                                        WFFVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                                                                                                                                                                                                                             FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 60606-6402

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compati
                                                                                                                                                                                                       TELEFAX: 31.
TELEFAX: 25-3856
                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                  TELEPHONE: 312/4.
TELEPHONE: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/O: FILING DATE: 07-JUN-1995 CLASSIFICATION: 424
                                                                                                                                                                                                                                                                        NAME: Clough, David W. REGISTRATION NUMBER: 36,107
                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                55.0%;
                                                                                    Score 195; DB 2;
Pred. No. 2.92e-12;
7; Mismatches 11
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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Tabular output not generated. Run on: Fri Apr 28 14:26:04 2000: MasPar time 5.82 Seconds 332.252 Million cell updates/sec

Title:

Description: Perfect Score: >US-09-252-828-1 (1-41) from US09252828.pep 325

Sequence: 1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41

Searched: PAM 150 Gap 11 142080 seqs, 47172406 residues

Scoring table:

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: pir62 1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 31.323; Variance 49.714; scale 0.630

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score 314 287 213 1197 1195	Query Match 96.6 88.3 65.5 60.6 52.9	Length 424 210 426 427 424 424	DB 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	A36000 A56844 A50396 A60503 S70399 S70399	sperm-binding glycopr POM-Zp3 protein - hum zona pellucida glycopr zona pellucida glycopr zona pellucida glycopr zona pellucida glycopr	Pred. No. 3.56e-55 1.63e-48 1.13e-48 1.13e-27 1.85e-26
10	129		4 L D	N	B44365	sperm receptor ligand	1.01e-11
12	81 81		58 58	2 -	S35573	zona pellucida glycop	1.80e-02 2.71e-02
13	81		422	2	S52848	rotein	2.71e-02
14 15	80 80		388 424	N N	S52716 S52847	sperm receptor ZP3 · egg membrane protein	4.06e-02 4.06e-02
16 17	74 74		74 499	N N	A60518 A28997	nthophin d acvlglycer	.326
18	73 73		55 666	υμ	IJHUG3		.346
20	72		71	⊢ :	N2NJ1S	×	9.27e-01
21	72		745	ν	C70848	2 protei	. 27e
22 23	71 70		583 91	22	S19476 G71562	hypothetical protein probable ferredoxin i	1.35e+00 1.96e+00

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	C71544	ACCHD1	S09269	C72508	S09272	T14998	A45054	JN0724	в72699	A55301	ACBOA1	T09578	S49526	T08097	S54309	н69834	JE0337	A40684	S35069	н70566	E70542	A33176	
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23-424
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                                                                                                                                                        ##molecule_type mRNA
##residues
                                                                                                                             ##cross-references EMBL:U05780; NID:g458276; PIDN:AAA74387.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   146 SWFPVEGPADICQCCNKGDCGTPSHSRRQPRVVSQWSTSAS 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##residues
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##cross-references GB:U10099; NID:g607803; PID:g607804
# length 210 #molecular-weight 23196 #chec
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Similarity 95.1%;
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                                                                                                                                                                                                                                   Harris, J.D.; Hibler, D.W.; Fontenot, G.K.; Hsu
Yurewicz, E.C.; Sacco, A.G.
DNA Seq. (1994) 4:361-393
Cloning and characterization of zona pellucida
cDNAs from a variety of mammalian species: th
                                              #domain
#length 426
                                                                                                 *superfamily sperm-binding glycoprotein
                                                                                                                                                                                                   S70396
                                                                                                                                                                                                                                                                                                                                                         $70396 #type complete
zona pellucida glycoprotein C - dog
#formal_name Canis lupus familiaris #common_name dog
28-Oct-1996 #sequence_revision 27-Feb-1997 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kipersztok, S.; Osawa, G.A.; Liang, L.; Modi, W.S.; Dean, Genomics (1995) 25:354-359
POM-ZP3, a bipartite transcript derived from human ZP3 and POM121 homologue.
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19-Oct-1995 #sequence_revision 19-Oct-1995 #text_change
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#domain ZP domain homology #label ZPH #domain ZP domain the domain 424 #molecular-weight 47028 #checksum 5505
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   65.5%;
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                                         ZP domain homology #label #molecular-weight 47367 #
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Score 213; DB 2;
Pred. No. 1.13e-30;
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Pred. No. 1.63e-48;
3; Mismatches 2;
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Pred. No. 3.56e-55;
""smatches 1;
           Length 426;
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the ZPA, ZP
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                                                                                                                                               ##cross-references EMBL:U05778; NID:g458272; PIDN:AAA74390.1; PID:g458273
                                                                                                                                                                                                                      ##residues 1-42
                                                                                                                                                                                                                                                                                    ##status
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##residues 1-422 ##label KIN
##cross-references GB:M63629
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This sulfated glycoprotein in the zona pellucida of the occyte i receptor for sperm binding. It has O-linked as well as N-linke
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Similarity 56.1%;
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                                                                                                            #superfamily sperm-binding glycoprotein
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#length 424
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zona pellucida glycoprotein C - cat
#formal_name Felis silvestris catus #common_name domestic
28-Oct-1996 #sequence_revision 27-Feb-1997 #text_change
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Dev. Biol. (1990) 142:414-421
Genomic organization and polypeptide primary structure of zona pellucida glycoprotein hZP3, the hamster sperm
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ZP domain homology #label #molecular-weight 46853
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Pred. No. 6.33e-27;
11; Mismatches 7;
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#introns 103/3; 143/2; 178/1; 239/2; 278/3; 309/2; 355/1 CLASSIFICATION #superfamily sperm-binding glycoprotein ZP3; ZP domain homology	arences MUID:88320451 A3123 A3123 not compared with c ile_type DNA 1-152,'E',154-252,' references EMBL:J03851 A48823 Rosiere, T.K.; Wassarman Bev. Biol. (1992) 154:30 Identification of a regi glycoprotein m2P3 that arences MUID:93050795 A48823	R 6 NATE_NAMES ISM SIONS ENCE 1thors 1thors 1tle 1tle	Best Local Similarity 55.0%; Pred. No. 1.85e-26; Matches 22; Conservative 7; Mismatches 11; Indels 0; Gaps 0; Db 307 WFPVEGPADICNCCNKGSCGLQGRSWRLSHLDRPWHKMAS 346
	WOOCOTO!	##crossion A3034 ##residues 1.424 ##habel RIN ##residues GB:M20026; NID:g1663713; PIDN:AAB18629.1; ##cross-references GB:M20026; NID:g1663713; PIDN:AAB18629.1; ##cross-references GB:M20026; NID:g1663713; PIDN:AAB18629.1; ##cross-references Kinloch, R.A.; Wassarman, P.M. ##outhors Nucleic Acids Res. (1989) 17:2861-2863 ##title Nucleic Acids Res. (1989) 17:2861-2863 ##title Nucleic Acids Res. (1989) 17:2861-2863 ##cross-references MUD:89240048 ##cross-references MUD:89240048 ##cross-references MUD:89240048 ##cross-references EMBL:X14376 ##cross-references EMBL:X14376 ##title Nassarman, P.M. ##residues Rinloch, R.A.; Roller, R.J.; Fimiani, C.M.; Wassarman ##ournal Proc. Natl. Acad. Sci. U.S.A. (1988) 85:6409-6413 ##title determined by genomic cloning. ##cross-references MUD:88320451 ##cross-references MUD:88320451 ##cross-references EMBL:J03851 ##cross-references EMBL:J03851 ##residues 1:152, E',154-252, E',254-424 ##label KI2 ##cross-references EMBL:J03851 ##authors Rosiere, T.K.; Wassarman, P.M. ##outhors Rosiere, T.K.; Wassarman, P.M. ###Outhors Rosiere, T.K.; Wassarman, P.M. ###################################	Sperm binding glycoprotein zp3 precursor - mouse E Sperm receptor: Zona pellucida glycoprotein Zp3; zp3
#cross-references MUID:88320451 #accession A31232 #status not compared with conceptual translation ##molecule_type DNA		#accession A3034 ##molecule_type DNA; mRNA ##residues 1.424 ##label RIN ##residues 1.424 ##label RIN ##cross-references GB:M20026; NID:g1663713; PIDN:AAB18629.1 #ERENCE PID:g1663714 ERENCE S04189 #authors Kinloch, R.A.; Wassarman, P.M. #authors Nucleic Acids Res. (1989) 17:2861-2863 # journal Nucleic Acids Res. (1989) 17:2861-2863 # title Nucleotide sequence of the gene encoding zona pe # title quocorrottein ZP3 - the mouse sperm receptor.	sperm-binding glycoprotein ZP3 precursor - mouse sperm receptor; Zona pellucida glycoprotein ZP3; ZP3 glycoprotein glycoprotein glycoprotein glycoprotein glycoprotein glycoprotein glycoprotein glycoprotein glycoprotein zP3; ZP3 glycoprotein glycoprotein glycoprotein zP3; ZP3 glycoprotein gl
#Cross-references MUID:89240048 #accession \$04189 #accession \$04189 #translation not shown ##status #tresidues 1-423 ##label KIN ##cross-references EMBL:X14376 ERENCE A31232 #authors Kinloch, R.A.: Roller, R.J.: Fimiani, C.M.: Wassarman, D.A.: #journal Proc. Natl. Acad. Sci. U.S.A. (1988) 85:6409-6413 Primary structure of the mouse sperm receptor polypeptide #cross-references MUID:88320451 #accession Not compared with conceptual translation ##status #across-references EMBL:J03851 #accession A3122 #authors Rosiere, T.K.: Wassarman, P.M. #journal Dev. Biol. (1992) 154:309-317 #title Identification of a region of mouse zona pellucida #procession A48823 #accession A48823 #accession A48823 #accession A48823 #accession A48823 ##status #erosicrecs MUID:93050795 #accession A48823 ##status ##experimental_source ovary ##experimental_source	#Cross-references MUID:89240048 #accession S04189 ##status translation not shown ##status translation not shown ##molecule_type DNA #label KIN ##cesidues 1-423 ##label KIN ##cross-references EMBL:X14376 ERENCE A3123 #authors Kinloch, R.A.; Roller, R.J.; Fimiani, C.M.; Wassarman, D.A. #authors Kinloch, P.M. Wassarman, P.M. #journal Proc. Natl. Acad. Sci. U.S.A. (1988) 85:6409-6413 Primary structure of the mouse sperm receptor polypeptide #title determined by denomic Choine		A30334 #type complete sperm-binding glycoprotein ZP3 precursor - mouse sperm receptor; zona pellucida glycoprotein ZP3; ZP3 glycoprotein glycoprotein #formal_name Mus musculus #common_name house mouse 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_cha 10-Sep-1999 310NS A30334 A30334 A30334 ENCE Ringuette, M.J.; Chamberlin, M.E.; Baur, A.W.; Sobie D.A.; Dean, J. Dev. Biol. (1988) 127:287-295 Molecular analysis of cDNA coding for ZP3, a sperm b protein of the mouse zona pellucida. coss-references Multip:8842926

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#cross-references MUID:95143578

#accession $70433
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Best Local Similarity 53.7%;
Matches 22; Conservative
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Cloning and characterization of zona pellucida genes and cDNAs from a variety of mammalian species: the ZPA, ZPB and ZPC gene families.
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zona pellucida glycoprotein C - bovine
#formal_name Bos primigenius taurus #common_name cattle
10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change
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zona pellucida glycoprotein C - pig
#formal_name Sus scrofa domestica #common_name domestic pig
10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
16; Conser
                                                                                  Cloning and characterization of the human sperm receptor ligand £93: evidence for a second polymorphic allele with different frequency in the Caucasian and Japanese
                                                                                                                                                                            van Duin, M.; Polman, J.E.; Verkoelen, C.C.;
Meyerink, J.H.; Olijve, W.; Aitken, R.J.
Genomics (1992) 14:1064-1070
                                    B44365
                                                                                                                                                                                                                                                                                                                          B44365 #type fragment
sperm receptor ligand homolog ZP3-372 - human (fragment)
#formal_name Homo sapiens #common_name man
21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *superfamily sperm-binding glycoprotein zp3; zp domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #domain ZP domain homology #label #length 415 #checksum 9740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Harris, J.D.; Hibler, D.W.; Fontenot, G.K.; Hsu, K.T.; Yurewicz, E.C.; Sacco, A.G.

DNA Seq. (1994) 4:361-393

Cloning and characterization of zona pellucida genes and Cloning are characterization of zona pellucida genes and characterization of z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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zona pellucida glycoprotein C - rabbit (fragment)
#formal_name Oryctolagus cuniculus #common_name d
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ferences EMBL:U05775; NID:9458266; PIDN:AAA74385.1;
PID:9458267
#superfamily sperm-binding glycoprotein ZP3; ZP dor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #length
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preliminary
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th 421 #molecular-weight 46545 #che
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56.7%;
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Pred. No. 3.81e-12;
7; Mismatches 8
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Pred. No. 1.39e-17
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##experimental_source
CLASSIFICATION #superfamil
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#authors
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ENTRY
TITLE
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                                        #accession byserv

##molecule_type protein

##restidues 1-15;16-30;31-58 ##label TOE
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                                                                                                           #authors Toepfer-Petersen, E.; Mann, K.; Calvete, J.J.
#fournal Biol. Chem. Hoppe-Seyler (1993) 374:411-417
Identification of porcine cocyte 55 kDa alpha and beta
proteins within the zona pellucida glycoprotein fami.
indicates that cocyte sperm receptor activity is ass.
with different zona pellucida proteins in different
mammalian species.
#cross references MUID:94030657
#accession $35573
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##molecule_type mRNA
##mosidues 1-428 ##label
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Local Similarity 30.4%;
hes 7; Conservative
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##residues 1-44 ##label VAN
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                        *superfamily sperm-binding glycoprotein
   glycoprotein;
                                                                                                                                                                                                                                                                                                          $35573 #type fragments
zona pellucida glycoprotein beta chain - pig (fragments)
#formal_name Sus scrofa domestica #common_name domestic 20-May-1994 #sequence_revision 30-Jan-1998 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #domain ZP domain homology #label ZPH
#length 428 #molecular-weight 46651 #checksum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chang, Y.; Wang, S.; Tsao, C.; Huang, F. submitted to the EMBL Data Library, April 1995 Structural analysis and expression of carp ZP3 gene. $52845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #superfamily sperm-binding glycoprotein ZP3; ZP domain
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## protein - goldfish

#formal_name Carassius auratus #common_name goldfish

10-Sep-1999 #sequence_revision 10-Sep-1999 #text_chan
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oocyte;
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Pred. No. 1.80e-02;
10; Mismatches 5; Indels
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Best Local Similarity 30.6%;
Matches 11; Conservative
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Best Local Similarity 69.2%;
                                                                             Query Match 24.6%;
Best Local Similarity 30.6%;
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##cross-references EMBL:248973; NID:g763079; PIDN:CAA88837.1;
PID:g763080
                                                                                                                                                                        ##cross-references EMBL:Z48798
FICATION #superfamily sperm-binding glycoprotein ZP3;
homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  381 GWLAADGNHQACGCCD-STCG-PGVGSAAPVGGVQW 414
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##residues 1-388 ##label CHA
                              347 GWLAADGNHQACGCCD-STCG-PGVGSAAPIGGVQW 380
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SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQW 36
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                                                                                                                                                                                                                                                                                                                                                 $52716 #type complete

sperm receptor ZP3 - common carp
#formal_name Cyprinus carpio #common_name common carp
19-May-1995 #sequence_revision 21-Jul-1995 #text_change
23-May-1997
                                                                                                                                                                                                                                                          Chang, Y.; Wang, S.; Tsao, C.; Huang, F. submitted to the EMBL Data Library, March 1995 Structural analysis and expression of carp ZP3 gene. $52716
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S52845
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#length 422 #molecular-weight 46187 #che
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#length 388 #molecular-weight 42248 #che
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th 58 #checksum 7568
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                                                            Score 80; DB 2;
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9; Mismatches 1
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#description
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1-424 ##label CHA

##cross-references EMBL:Z48972; NID:g763077; PIDN:CAA88836.1;

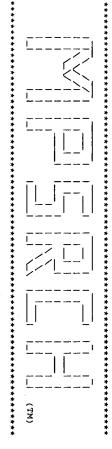
#BID:g763078

PID:g763078

FID:g763078

#superfamily sperm-binding glycoprotein ZP3; ZP domain
                                                                                                          368 GWLAADGNHQVCSCCD-STCGLDGGIAASPSGGVQW 402
                                                                         1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQW 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15
                                                                                                                                               h 24.6%;
Similarity 27.8%;
10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                           Chang, Y.; Wang, S.; Tsao, C.; Huang, F. submitted to the EMBL Data Library, April 1995 Structural analysis and expression of carp ZP3 gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #formal_name Cyprinus carpio #common_name common carp 09-Jun-1995 #sequence_revision 21-Jul-1995 #text_change 20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S52847 #type fragment
egg membrane protein ZP3 (clone pCOV638) - common carp
[fragment]
                                                                                                                                                                                                                                                                                                                                                                                               S52847
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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Tabular output not generated. Run on: Fri Apr 28 14:23:32 2000; MasPar time 3.68 Seconds 332.330 Million cell updates/sec

Title:

Description: Perfect Score:

Sequence: >US-09-252-828-1 (1-41) from US09252828.pep 325 1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41

Scoring table: Searched: PAM 150 Gap 11

82229 seqs, 29864866 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: swiss-prot38 1:swissprot

Statistics: Mean 32.196; Variance 46.313; scale 0.695

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.
314 303 303 301 253 195 1156 1156 76 76 77 77 77 77 77 77 77 77 77	Score
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4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	DB.
ZP3A_HUMAN ZP3A_MCRA ZP3A_MCRA ZP3A_CALSQ ZP3_CANFA ZP3_MESAU ZP3_FELCA ZP3_MESAU ZP3_FELCA ZP3_BOVIN ZP3_FABIT NXL1_NAJNA NXL2_NAJNA NXL4_NAJNA NXL5_NAJNA NXL5_NAJN	ID
ZONA PELLUCIDA SPERM-B ZONA SPERM-B ZONA SPELLUCIDA SPERM-B ZONA SPERM-B ZONA SPERM-B ZONA	Description
18.98e-61 28.81e-58 3.01e-58 3.01e-59 1.32e-34 9.47e-29 1.62e-19 1.62	Pred. No.

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ALIGNMENTS

RESULT ID Z AC P AC P DT 0 DT 0 DT 1 DT 1 C C C C C C C C C C C C C C C C C C C	IT 1 273A_HUMAN STANDARD; PRT; 424 AA. 27754; 21754; 21-MAY-1991 (Rel. 18, Created) 21-MAY-1991 (Rel. 18, Last sequence update) 215-DEC-1999 (Rel. 39, Last annotation update) 200A PELLUCIDA SPERM-BINDING PROTEIN 3A PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP3A) (ZONA PELLUCIDA PROTEIN C) (SPERM RECEPTOR) (ZP3). 203A OR ZP3. 40mo sapiens (Human). 41mon sapiens (Human). 51mon sapiens (Human). 51mon sapiens (Primates; Catarrhini; Hominidae; Homo.
R 0 0 0	ta;
R P	SEQUENCE FROM N.A. MEDLINE; 90349545.
RA S	IN M.E., DEAN J.;
RT	mouse
R Z	Proc. Natl. Acad. Sci. U.S.A. 87:6014-6018(1990).
₽.	SEQUENCE OF 329-424 FROM N.A.
2 7	TISSUE=OVARY;
RA S	VAN DUIN M., POLMAN J.E., VERKOELEN C.C., BUNSCHOTEN H.,
RA	MEYERINK J.H., OLIJVE W., AITKEN R.J.;
3 2	and characterization of the human sperm receptor
RT Z	in the Caucasian and Japanese populations.";
RL	Genomics 14:1064-1070(1992).
88	-!- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE
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88	 -i- SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.
a	-!- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR
38	MATRIX.
6	-!- SIMILARITY: CONTAINS 1 ZP DOMAIN.
88	The control of the co
3 8	between the Swiss Institute of Bidinformatics and the EMBL outstation -
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ñ	use by non-profit institutions as long as its content is in no
Ö	modified and this statement is not removed. Usage by and for commercial
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Genomics 14:1064-1070(1992).

-! FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO SPECIES-SPECIFICITY OF THE INSEMINATION.
-! SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 CONFELEX INTO COPOLIYMERS CROSS-LINKED BY WITH SULFATED GLYCOPROTEIN WITH OLINKED OLIGOSACCHARIDES.
-! SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.
-! SUBCELLULAR CONTAINS 1 ZP DOMAIN.
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMMEL outstation the European Bioinformatics Institute. There are no restrictions on its modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                     EMBL; X56777;
EMBL; A18567;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE; 93122//...
VAN DUIN M., POLMAN J.E.,
VAN DUIN M., POLMAN J.E.,
VAN DUIN M., POLMAN J.E.,
VAN DUIN M.,
VAN DUIN M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEYERINK J.H., OLIJVE W., AITKEN R.J.;
"Cloning and characterization of the human sperm receptor ligand ZP3:
evidence for a second polymorphic allele with a different frequency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-OCT-1994 (Rel. 30, Created)
01-OCT-1994 (Rel. 30, Last sequence update)
15-DEC-1999 (Rel. 30, Last annotation update)
20NA PELLUCIDA SPERM-BINDING PROTEIN 3B PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP3B) (SPERM RECEPTOR) (ZP3).
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SEQUENCE
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MIM; 182889;
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                               Sperm; Receptor;
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Best Local Similarity 92.7%
Matches 38; Conservative
                          CARBOHYD
CARBOHYD
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                                                                                                                SIGNAL
                                                                                                                        Glycoprotein; Signal;
Extracellular matrix;
                                                                                                                                                                                            the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                      EMBL; X82639; CAA57961.1; -.
                                                                                                                                                                                                                                                                                                                         **NUCLEURI S.K., KAÜL R., BANERJEE K., GUPTA S.K.;
**NUCLEOCTICLE SEQUENCE OF CDNA encoding bonnet monkey (Macaca radiata)
zona pellucida glycoprotein.zp3.*;
Reprod. Fertil Dev. 7:1209-1212(1995)
-: PUNCTION: PUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICITY OF THE INSEMINATION.
-: SUBCULS-SPECIFICITY OF THE INSEMINATION.
-: SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.
-:- SUBCELLULAR LOCATION: TYPE I MEMBERANE PROTEIN. EXTRACELLULAR
                                                                                                                                                  PFAM; PF00100;
                                                                                                                                                                PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P53785;
D1-OCT-1996 (Rel. 34, Created)
O1-OCT-1996 (Rel. 34, Last sequence update)
15-DEC-1999 (Rel. 39, Last annotation update)
ZONA PELLUCIDA SPERM-BINDING PROTEIN 3A PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP3A) (ZONA PELLUCIDA PROTEIN C) (SPERM RECEPTOR) (ZP3).
                                                                                                                                                                                                                                                                                                   -!- SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Macaca radiata (Bonnet monkey).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia;
Butheria; Primates; Catarrhini; Cercopithecidae; Cercopithecinae;
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SEQUENCE
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                                                                                                                   PS00682; ZP_DOMAIN; 1.
00100; zona_pellucida; 1.
tein; Signal; Sulfatation; Sperm;
tular matrix; Multigene family.
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EXTRACELLULAR (
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Pred. No. 8.81e-58;
1; Mismatches ;
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9D714735
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ZONA PELLUCIDA SPERM-BINDING PROTEIN 3B.
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  (See http://www.isb-sib.ch/announce/
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                                                       (POTENTIAL)
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                                                                                           SPERM-BINDING
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Best Local
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                                                                                                                                   CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZPA_CALSQ STANDARD; PRT; 424 AA.
P53786;
P53786;
O1-OCT-1996 (Rel. 34, Created)
O1-OCT-1996 (Rel. 34, Last sequence update)
15-DEC-1999 (Rel. 39, Last annotation update)
ZPA_CALSUM PELLUCIDA SPERM-BINDING PROTEIN APRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP3A) (ZONA PELLUCIDA PROTEIN C) (SPERM RECEPTOR) (ZP3).
ZP3A_OR_ZP3.
                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Cloning, sequencing and oocyte-specific expression of the marmoset sperm receptor protein, ZP3.";
Zygote 1:93-101(1993).
-i- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-OVARY;
                                                                                                         SEQUENCE
                                                                                                                     CARBOHYD
                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                           SIGNAL
                                                                                                                                                                                                                                                                                                 PROSITE; PS00
                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Callithrix sp. (Marmoset)
Eukaryota; Metazoa; Chord
                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                   TRANSMEM
                                                                                                                                                                                                                 DOMAIN
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                                                                                                                                                                                                                                                        Extracellular
                                                                                                                                                                                                                                                                                   PFAM; PF00100;
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                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  308 SWFPVEGPADICQCCSKGDCGTPSHSRRQPHVVSQWSRSAS 348
                          308
                                                                                                                                                                                                                                                                      .ycoprotein;
                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE F SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO SPECIES-SPECIFICITY OF THE INSEMINATION.
SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN
                                                                                                                                                                                                                                                                                                                                                                                                                                             PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES SIMILARITY: CONTAINS 1 ZP DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MATRIX
                         SWFPVEGPADICQCCSKGDCGTPSHARRQPHVVS 341
SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS
                                                   Similarity 88.2% 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity 90.2% 37; Conservative
                                                                                                                                                                                                                                                                                                 PS00682;
                                                                                                                    124 AA;
                                                                                                                                                                                                                                                                     ; zona_pellucida;
signal; sulfatat
                                                                                                                                                                                                                                                        matrix;
                                                                                                                                                                                                                                                                                                             AAB31866.1;
                                                                                                                                                                                                                                                                                              ZP_DOMAIN; 1.
                                                               77.8%;
88.2%;
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                                                                                                         46809
                                                                                                                                                                                                                                                        Multigene family.
                                                                                                                                                                                                                                                                      Sulfatation;
                                                                                                          ME.
                                                 Score 253; DB 1; Len
Pred. No. 2.37e-44;
Pred. '---+ches 0;
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Pred. No. 3.07e-57;
3; Mismatches 1;
                                                                                                                                 POTENTIAL. POTENTIAL.
                                                                                                                                                           ZP.
POTENTIAL.
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                                                                                                                                                                                                                 EXTRACELLULAR
                                                                                                                                                                                                                               ZONA PELLUCIDA
                                                                                                         2FAE3AAD CRC32;
                                                                                                                                                                                                                                                                     Sperm; Receptor; Transmembrane
34
                                                                                                                                                                                      (POTENTIAL).
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P48831;
01-FEB-1996
01-FEB-1996
15-DEC-1999
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01-FEB-1996 (Rel. 33, Last senence update)
15-DEC-1999 (Rel. 39, Last annotation update)
20NA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP3) (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entitles requires a license agreement (See http://www.isb-or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OKAZAKI Y., SUGIMOTO M.;

Submitted (JAN-1995) to the EMBL/GenBank/DDBJ databases.

-I- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICITY OF THE INSEMINATION (BY SIMILARITY).

-I- SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLIMERS CROSS-LINKED BY ZP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Eventhe European Bioinformatics Institute. There are no restricted the companion of the companion of the control of the companion o
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Canis familiaris (Dog).
Fukarvota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; U05780;
EMBL; D45070;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       between the Swiss Institute of Bioinr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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                            307
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY: CONTAINS 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MATRIX
WYPVEGSADICRCCNKGSCGLPGRSRRLSHLERGWRKSVS
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                                                                                 Similarity
24; Conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS00682; ZP_DOMAIN; 1.
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larity 60.0%;
Conservative
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9CB10DE2
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                                                                                                                DB 1;
'.33e-34;
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CRC32;
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Best Local S
Matches 2
ZP3_FELCA
P48832;
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CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KINLOCH R.A., RUIZ-SELLER B., WASSARMAN P.M.;

"Genomic organization and polypeptide primary structure of zona pellucida glycoprotein hzp3, the hamster sperm receptor.";

Dev. Biol. 142:414-421(1991).

1: FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THIS SPECIES-SPECIFICITY OF THE INSEMINATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLYCOPROTEIN ZP3) (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P23491;
01-NOV-1991 (Rel. 20, Created)
01-FBB-1996 (Rel. 33, Last sequence update)
15-DEC-1999 (Rel. 39, Last annotation update)
20NA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA
                                                                                                                                                                      SEQUENCE
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                                                                                                                                                                                                                                                                                                                                 PFAM; PF00100;
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                                                                                                                          Local Similarity
nes 23; Conse
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PTM: SULFATED GLYCOPROTEIN WITH
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                                                                            SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
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00100; zona_pellucida;
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ITH O-LINKED OLIGOSACCHARIDES
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                                                                                                                                   197; DB 1;
No. 9.47e-30;
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                                                                                                                                                                                                                                                                                                                                                                                                          There are no restrictions ong as its content is in
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ZP3_MOUSE
P10761;
01-JUL-1989
01-NOV-1997
                                                                                                                                                                                         CARBOHYD
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entrepean Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                     SEQUENCE
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ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA
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                                                                                                                                    Local
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FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICITY OF THE INSEMINATION (BY SIMILARITY).
SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPPLYMERS CROSS-LINKED BY ZP1.
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SIMILARITY: CONTAINS 1 ZP DOMAIN.
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Pred. No. 3.06e-29;
7; Mismatches 11
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(Rel. 11, Created) (Rel. 35, Last sec

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STANDARD

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PIR; S04189; S04189.
PIR; A30334; A30334.
PIR; A31232; A31232
MGD; MGI:99215; ZP3.
MGD; MGI:99215; ZP3.
PROM; PPO0100; Zona_pellucida; 1.
Glycoprotein; Signal; Sulfatation; S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE; 93050795.

MOSIERE T.K., WASSARMAN P.M.;

ROSIERE T.K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE;
                                                                                                                                                                                                                           use by non-profit institutions as long as modified and this statement is not removed. On entitles requires a license agreement (See htt or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Primary structure of
by genomic cloning.";
Proc. Natl. Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZP3 -- the mouse
Nucleic Acids Res
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RINGUETTE M.J., CHAMBERLIN M.E., BA "MOLECULAR analysis of cDNA coding of the mouse zona pellucida."; pev. Biol. 127:287-295(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZP3
                                                                                                                                                               EMBL; M20026; AAB18629.1; -. EMBL; X14376; CAA32550.1; -.
                                                                                                                                                                                                                                                                                                                                        between
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 49-63;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KINLOCH R.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-CD-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZONA PELLUCIDA SPI
GLYCOPROTEIN ZP3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-DEC-1999 (Rel. ZONA PELLUCIDA SP
                                                                                                                                                                                                                                                                                                                                                                                                                        -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KINLOCH R.A., WASSARMAN P.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE;
                                                                                                                                                                                                                                                                                                                                                                                               DEVELOPMENTAL STAGE: EXPRESSED DURING THE 2-WEEK GROWTH PHASE OCCENESIS, PRIOR TO OVULTATION PHASE PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES. SIMILARITY: CONTAINS 1 ZP DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MATRIX.
TISSUE SPECIFICITY: OOCYTES
                                                                                                                                                                                                                                                                                                             European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OR ZP-3.
                                                                                                                                                                                                                                                                                                         SWISS-PROT entry is copyright. It is produced through a collab
een the Swiss Institute of Bioinformatics and the EMBL outst
European Bioinformatics Institute. There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FROM N.A.
88320451.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      D-1; TISSUE=LIVER;
89240048.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FROM N.A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Metazoa;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (NOV-1996) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ROLLER R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          el. 39, Last annotation update)
SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA
P3) (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sperm receptor.";
s. 17:2861-2863(1989)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        197-204;
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Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U.S.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FIMIANI C.M., WASSARMAN D.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        219-233 AND 261-275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL/GenBank/DDBJ
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               Sperm;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      receptor polypeptide
                                                                                                                                                                                                                                                 (See http://www.isb-sib.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vertebrata;
               Receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          zona pellucida glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Murinae;
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a sperm b
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia;
Mus.
               Transmembrane;
                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                      a collaboration - MBL outstation
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Best Local S
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZP3_PIG
P42098;
01-NOV-1995
                                                                                                                                                                                                                                                                                TISSUE-OVARY;

OKAZAKI Y., SUGIMOTO M.;

SUBMITTED (JAN-1995) to the EMBL/GenBank/DDBJ databases.

SUBMITTED (JAN-1995) to the EMBL/GenBank/DDBJ databases.

FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICITY OF THE INSEMINATION (BY SIMILARITY).

SPECIES-SPECIFICITY OF THE INSEMINATION (BY SIMILARITY).

SUBUNIT: 293 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
DOMAIN
CARBOHYD
CARBOHYD
CARBOHYD
           PROSITE: PS00682; ZP_DOMAIN; 1.
PFAM; PF00100; zona_pellucida; 1.
Glycoprotein; Signal; Sulfatation;
Extracellular matrix.
SIGNAL 1 21 POTEN;
CHAIN 22 421 ZONA;
                                                                     EMBL; L22169; AAA31145.1; -.
EMBL; D45065; BAA08093.1; -.
PROSITE; PS00682; ZP_DOMAIN;
                                                                                                                               modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sus scrofa (Pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1995 (Rel. 32, Last sequence update)
15-DEC-1999 (Rel. 39, Last annotation update)
ZONA PELLUCIDA SPERM-BINDING PROTEIN 3-BETA PRECURSOR (ZONA PELLUCIDA
GLYCOPROTEIN ZP3-BETA) (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                     or send an email to license@isb-sib.ch).
                                                                                                                                           modified and this statement
                                                                                                                                                                    the European Bioinformatics Institute.
                                                                                                                                                                                  between
                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (JUL-1993)
                                                                                                                                                                                                                                                                                                                                                                                                                            YUREWICZ E.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-OVARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZP3B OR ZPC.
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                                                                                                                                                                                                                    SIMILARITY: CONTAINS 1
                                                                                                                                                                                                                                 PIM:
                                                                                                                                                                                                                                                        TISSUE SPECIFICITY: OOCYTES.
                                                                                                                                                                                           SWISS-PROT entry is copyright.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS
                                                                                                                                                                                                                                : SULFATED GLYCOPROTEIN SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             h 52.9%;
Similarity 53.7%;
22; Conservative
                                                                                                                                                                                 the Swiss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>Cetartiodactyla;</u>
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                                                                                                                                                                                                                                                                                                                                                                                                                            FONTENOT G.K.,
                                                                                                                                                                                                                   ZP DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Suina;
                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 172; DB 1;
Pred. No. 1.89e-23;
9; Mismatches 10
                                                                                                                                                                  yright. It is produced through a collal of Bioinformatics and the EMBL outs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL. 3C46A909
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POTENTIAL.
           ZONA PELLUCIDA
                        POTENTIAL
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                                                                                                                                                                                                                                          WITH O-LINKED OLIGOSACCHARIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Suidae;
                                              Sperm;
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                                                                                                                                                                                                                                                                              PROTEIN. EXTRACELLULAR
                                              Receptor;
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           SPERM-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10;
                                                                                                                                                                                                                                                                                                                                                                                                                 databases
                                                                                                                                                      its content
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                                                Transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia
                                                                                                                                             and for
           PROTEIN
                                                                                                                                                                                 a collaboration
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P48830;

01-FEB-1996 (Rel. 33, Created)

01-FEB-1996 (Rel. 33, Last sequence update)

15-DEC-1999 (Rel. 39, Last annotation update)

ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZO

GLYCOPROTEIN ZP3B) (SPERM RECEPTOR) (ZONA PELLUCIDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
 Glycoprotein: Signal; Sulfatation: Sper Extracellular matrix: Multigene family. SIGNAL 2 POTENTIAL. CHAIN 23 421 ZONA PELLU DOMAIN 23 381 EXTRACELLU TRANSMEM 382 402 POTENTIAL.
                                                                                                                           use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE; 951435/8.
HARRIS J.D., HIBLER D.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZP3
                                                                            PFAM; PF00100;
                                                                                                     EMBL; U05775; AAA74385.1;
                                                                                                                                                                           the European Bioinformatics Institute.
                                                                                                                                                                                          between
                                                                                                                                                                                                                                                                                                                                         "Cloning and characterization of zona pellucial variety of mammalian species: the ZPA, ZPB DNA Seq. 4:361-393/1994).
-i- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                           SACCO A.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=OVARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      308 WSPVEGPAVICRCCHKGQCGTPSLSRK 334
| ||:||| ||:||:||||| ||:
| WFPVQGPADICQCCNKGDCGTPSHSRR 28
                                                                                                                                                                                                                             SIMILARITY).
SIMILARITY: CONTAINS 1 ZP DOMAIN
                                                                                                                                                                                                                                                                           SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO TH SPECIES-SPECIFICITY OF THE INSEMINATION (BY SIMILARITY).
SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.
SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BOVIN
                                                                                                                                                                                                                                                    PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES
                                                                                                                                                                                                                                                                  MATRIX
                                                                                                                                                                                       SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 49.5%;
Similarity 70.4%;
19; Conservative
                                                                                       PS00682; ZP_DOMAIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cetartiodactyla;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bovine).
Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22
403
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124
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101
101
101
                                                                    82; ZP_DOMAIN; 1.
zona_pellucida; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
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402
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101
107
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                                                                                                                                                                                                                                                                                                                                                                                                       FONTENOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 161; DB 1; Leux
Score 101; DB 1; Leux
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ca; Craniata;
Ruminantia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MISSING (IN REF. 2).
D -> V (IN REF. 2).
VF -> GV (IN REF. 2).
P -> A (IN REF. 2).
W; B87020A4 CRC32;
ZONA PELLUCIDA :
EXTRACELLULAR (:
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL.
POTENTIAL.
POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                           Sperm;
                                                                                                                                                                                                                                                                                                                                                                                                      G.K., HSU K.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                 pellucida genes
PA, ZPB and ZPC (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pecora;
                                                                                                                                                                         There are no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL)
                                                              Receptor;
             (POTENTIAL)
                          SPERM-BINDING
                                                                                                                                                                                                                                                                                                                                          IT IS RESPONSIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bovoidea;
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                                                              Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA PELLUCIDA
PROTEIN C).
                                                                                                                                                                                                                                                                                                                                                                 gene families.";
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                                                                                                                                                                             restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bovidae;
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Matches 1
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01-FEB-1996 (Rel. 33, Last sequence update)
01-FEB-1996 (Rel. 33, Last sequence update)
01-FEB-1996 (Rel. 33, Last annotation update)
201A PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA ZONA PELLUCIDA SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C)
                                                                                         TRANSMEM
DOMAIN
DOMAIN
SEQUENCE
                                                                                                                                                              NON_TER
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P48833;
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DOMAIN
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SEQUENCE
                                                                                                                                                                                  EXBL; U05782; AAA74392.1; -
PROSITE; PS00682; ZP_DOMAIN; 1.
PFAM; PF00100; zona_pellucida; 1.
Glycoprotein; Signal; Sulfatation; Sper
Extracellular matrix; Multigene family.
                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.lsb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE; 9514
HARRIS J.D.,
                                                                                                                                                                                                                                                                                                                                               a variety of mammalian sp DNA Seq. 4:361-393(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; C
                                                                                                                                        DOMAIN
                                                                                                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                                                                                  SACCO A.G.;
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           302 SWAPVEGSADICECCGNGDCDLIAGSPMNQNH 333
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2 WFPVQGPADICQCCNKGDCGTPSHSRRQPH 31
                                                          Local
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 SWFPVQGPADICQCCNKGDCG
                                              Similarity
16; Conse
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                                                         40.3%;
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 -TPSHSRRQPH
                                             Pred.
                                                                   Score 131;
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Pred. No. 1.62e-19;
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POTENTIAL.
POTENTIAL.
POTENTIAL.
; B52724BA
                                                                                                                 POTENTIAL.
CYTOPLASMIC (POTENTIAL).
                                                                                                                                       ZONA PELLUCIDA EXTRACELLULAR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Mammalia;
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                                                                                            BA52E674 CRC32;
                                                                                                                                                                                                                                                                                                                                                          f zona pellucida genes and the ZPA, ZPB and ZPC gene
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                                            Mismatches
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                                                          No. 1.43e-13;
                                                                                                                                                                                              Sperm;
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                                                                     DB 1;
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                                                                                                                                        (POTENTIAL)
                                                                                                                                                   SPERM-BINDING
                                              .,
                                                                   Length 415;
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P25669; P01392;

21-JUL-1986 (Rel. 01, Created)

21-JUL-1986 (Rel. 01, Last sequence update)

15-DEC-1998 (Rel. 37, Last annotation update)

LONG NEGROTOXIN 2 (TOXIN B).

Naja naja (Indian cobra).

Naja naja (Indian cobra).

Naja naja (Indian cobra).

Naja naja (Indian cobra).

Naja naja (Indian cobra).
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Best Local
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21-JUL-1986 (Rel. 01, Created)
01-MAY-1992 (Rel. 22, Last sequence update)
01-MAY-1992 (Rel. 22, Last annotation update)
1.ONG NEUROTOXIN 1 (TOXIN A).
Naja naja (Indian cobra)
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Lepidosauria;
Squamata; Scleroglossa; Serpentes; Colubroidea; Elapidae; Elapina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
DISULFID
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                                                                                                                                                      PFAM: PF00087; toxin; 1
Venom: Neurotoxin; Multigene family.
DISULFID 3 20
DISULFID 4 41
DISULFID 26 30
DISULFID 26 56
DISULFID 45 56
DISULFID 57 62
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NAKAI K., SASAKI T.,
                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Na ja
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OHTA M., SASAKI T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE; 77048940.
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HSSP; P01391; 1CTX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00272; SNAKE_TOXIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                  FEBS Lett. 72:161-166(1976).
PIR; A01663; N2NJ1I.
HSSP; P01391; 1CTX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-VENOM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biochem. Biophys. Res. Con-!- MISCELLANEOUS: LD(50)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /enom; Neurotoxin; Multigene family
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h 23.4%;
Similarity 42.3%;
11; Conservative
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ire of toxin
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                                                                                                                            MW;
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Pred. No.
5; Misma
Score 76; DB 1; Le
Pred. No. 6.41e-02;
5; Mismatches 8;
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.15 MG/KG BY SUBCUTANEOUS
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6.41e-02;
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                                                         Length 71;
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Best Local
                                                                                                                                                                                                                                                                                                   NXL4_NAJNA STANDAKU;
PZ5672;
Ol-MAY-1992 (Rel. 22, Created)
Ol-MAY-1992 (Rel. 22, Last sequence update)
Ol-MAY-1992 (Rel. 22, Last annotation update)
LONG NEUROTOXIN 4 (TOXIN D).
Neja neja (Indian cobra).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Lepidosauria;
Eukaryota; Metazoa; Serpentes; Colubroidea; Elapidae; Elapina(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NXI3.NAJNA STANDARD; PRT; /1 A...

P25671;

01-MAY-1992 (Rel. 22, Created)

01-MAY-1992 (Rel. 37, Last sequence update)

15-DEC-1998 (Rel. 37, Last annotation update)

LONG NEUROPOXIN 3 (TOXIN C).

Naja naja (Indian cobra).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Lepidosauria;

Eykaryota; Metazoa; Chordata; Craniata; Vertebrata; Lepidosauria;

Squamata; Scleroglossa; Serpentes; Colubroidea; Elapidae; Elapina;
Venom; Neurotoxin; NoisylfiD 3
DISULFID 14
DISULFID 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID DISULFID DISULFID DISULFID DISULFID
                                                                                               "The amino acid sequence of toxin D isola cobra (Naia naja).";
Biochim. Biophys. Acta 671:123-128(1981).
-!- MISCELLANEOUS: LD(50) IS 0.22 MG/KG B HSSP; P01391; LCTX.
PROSITE: P600272; SNAKE_TOXIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "The primary structure (Naja naja).";
Chem. Pharm. Bull. 29:1-!- MISCELLANEOUS: LD(
                                                    PROSITE; FOUNDATION 1.

PEAM; PF00087; toxin; 1.

Neurotoxin; Multigene
                                                                                                                                                                                                                                                            SEQUENCE.
TISSUE-VENOM;
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PROSITE; PS00
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE.
TISSUE-VENOM;
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PFAM; PF00087; toxin;
                                                                                                                                                                                                                                       MEDLINE;
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LD(50) IS 0.10 TO 0.
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4; Misma
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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Tabular output not generated. Run on: Fri Apr 28 14:24:25 2000; MasPar time 9.00 Seconds 315.757 Million cell updates/sec

Description: Perfect Score: Sequence: Title:

>US-09-252-828-1 (1-41) from US09252828.pep 325 1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41

Scoring table: PAM 150 Gap 11

Searched: 225878 seqs, 69334122 residues

Post:processing: Minimum Match 0% Listing first 45 summaries

Database: sptrembl12

1:sp_archea 2:sp_bacteria 3:sp_fungi 4:sp_human 5:sp_invertebrate 6:sp_mammal 7:sp_mhc 8:sp_organelle 9:sp_phage 10:sp_plant 11:sp_rodent 12:sp_unclassified 13:sp_vertebrate 14:sp_virus

Statistics:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Mean 31.925; Variance 46.387; scale 0.688

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TISSUE POLARITY PROTEI CASPASE-ACTIVATED NUCL DNA FRAGMENTATION FACT	DNA ORF1-ORF5.	HEPATIC TRIGLYCERIDE	NUOG, NADH DEHYDROGENA	B11.1 PR	ZP3 (CLONE PCOV638) (ZP3 GENE.	ZONA PELLUCIDA PROTEIN	FOR ZP3 (CLONE PCOV328	ZP3.	LIPA TRANSCRIPTIONAL	ZPC.	QUAIL ZPC.	ZONA PELLUCIDA 3 PROTE	GP43.	ZONA PELLUCIDA C GLYCO	ZONA PELLUCIDA SPERM-	POM-ZP3.	Description	
1 5.80e-01 1 8.72e-01 1 8.72e-01	3.846	3.84e	N	N	F 3.03e-02	3.03e-02	ω	_	1.26e-02	A 2.13e-03	2.93e-11	1.74e-11	2	8.72e-18	:0 8.72e-	B 1.16e-21	1.23e-	Pred. N	
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	9 Q00841 022013						Q9424	5 Q17768		20846			2 050655							1 Q15662	053611	•
DSRNA ADENOSINE DEAMIN BETA-1,3-D-GLUCAN BIND	GAG-LIKE POLYPROTEIN (C TERMINUS OF HSV US3	OSMOTIN (FRAGMENT).	TWO FIBERS, PROTEIN PV	HYPOTHETICAL 11.8 KD P	CODED FOR BY C. ELEGAN	CODED FOR BY C. ELEGAN	CODED FOR BY C. ELEGAN	FRIZZLED-1.	FRIZZLED PROTEIN HOMOL	FRIZZLED-1.	ESRS4.	HYPOTHETICAL 34.6 KD P	CAGH44 (FRAGMENT).	HYPOTHETICAL 23.3 KD P	FERREDOXIN.	SIMILARITY TO AN AMP-B	7-TRANSMEMBRANE PROTEI	GLUTAMATE SYNTHASE SMA	TRANSFORMATION-RELATED 1	DROGENA	DNASE INHIBITED BY DNA 8
2.90e+00 2.90e+00	2.90e+00	2.90e+00	2.90e+00	2.90e+00	2.90e+00	1.95e+00	1.95e+00	1.95e+00	1.95e+00	1.95e+00	1.95e+00	1.95e+00	1.95e+00	1.95e+00	1.95e+00	1.95e+00	1.31e+00	1.31e+00	1.31e+0	1.31∈	8.72e	8.72e

ALIGNMENTS

RESULT 1 ID Q12903; DT Q1-NOV-1 DT Q1-NOV-1 DT Q1-NOV-1 DT Q1-NOV-1 DE POM-ZP3. OS HOMO SAP OC Eutheria RN [1] RR SEQUENCE RC TISSUE-O RX KIDERSZT RT TOM-ZP3. RT HOMOLONE RF EMBL; U1 DR PFAM; PF SQ SEQUENCE DR EMBL; U1 DR PFAM; PF SQ SEQUENCE DR EMBL; U1 DR PFAM; PF SQ SEQUENCE DR PFAM; PF SQ SEQUENCE 1 16 SWF DD 146 SWF DD 146 SWF DD 17 01-NOV-1 DT Q1-NOV-1 DT

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Q91675;
Q1-NOV-1996
Q1-FEB-1997
Q1-NOV-1998
                                                                                                                                                                                                                                    Eukaryota;
Batrachia;
                           SEQUENCE FROM N.A.

HEDRICK J.L., YANG J.C.;

Submitted (JAN-1996) to the EMBL/GenBank/DDBJ

EMBL; U44952; AAB39079.1; -.

PFAM; PF00100; zona_pellucida; 1.
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XLZPC.
                                                                                                                                                                                                                                                                                            Xenopus laevis (African clawed frog).
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STRAIN-WISTAR: TISSUE-OVARY;
MACDUFF P.E., KERR L.E., ATT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
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SIMILARITY: CONTAINS
IN ZP2, ZP3, GP2, TGE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
21; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P.E., KERR L.E., AITKEN R.J.;
od. Fertil. Abstr. Ser. 18:86-86(1996).
                                                                                                                                                                                                                                 Metazoa; Chordata; Craniata; Ve. Anura; Mesobatrachia; Pipoidea;
                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel. 01, Created)
(TrEMBLrel. 02, Last sequence update)
(TrEMBLrel. 08, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51.4%;
larity 51.2%;
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Pred.
10; M
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POTENTIAL.

V -> A (IN REF. 2).

N -> S (IN REF. 2).

K -> M (IN REF. 2).

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EXTRACELLULAR (
POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  167;
No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sperm;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    454
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L.16e-21;
                                                                                                                                                                                                                                 Vertebrata;
ea; Pipidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J databases.
IT IS RESPONSIBLE FOR
ONTRIBUTE TO THE
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                                                                                                                                                                                                                              Xenopodinae;
                                                                                                                                                                                                                                                          Amphibia;
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Best Local
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077685;
01-NOV-1998
01-NOV-1999
                                                                                                                                                                                                             "Cloning and characterization of a zona pell marsupial, the brushtail possum Trichosurus Zygote 0:0-0(1998).
EMBL; AF079524; AAC28736.1; -.
FFAM; PF00100; zona_pellucida; 1.
PRINTS; PR00023; ZPELLUCIDA.
SEQUENCE 422 AA; 45714 MW; 69216067 CRC3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q91728;
Q91728;
Q1-NOV-1996
Q1-JAN-1998
Q1-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trichosurus vulpecula (Brush-tailed possum).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia;
Metatheria; Diprotodontia; Phalangeridae; Trichosurus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE; 98013448.

KUBO H., KAWANO T., TSUBUKI S., KAWASHIMA S., K
'A major glycoprotein of Xenopus egg vitelline
frog homolog of mammalian ZP3.';
Dev Growth Differ. 39:405-417(1997).

EMBL; D86568; BAA13117.1;

EFAM; PF00100; zona_pellucida; 1.
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CHAIN
SEQUENCE
314 WLPVEGPRDICSCCQTGTCISLSSSRKRS
                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MCCARTNEY C.A., MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Ven
Batrachia; Anura; Mesobatrachia; Pipoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GP43
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-OVARIES FROM HCG-TREATED FEMALES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  330 SWSPLQGPSNICSCCDTGNCVSVPGQSRRLGPYFSGSRWNQ 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 SWFPYQGPADICQCCNKGDC-GTPSHSRRQ-PHVM-SQWSR
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                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 46.5%;
Similarity 46.3%;
19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              h 46.5%;
Similarity 46.3%;
19; Conservative
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3 (TrEMBLrel.
6 (TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel. 08, (TrEMBLrel. 12,
                                                                                              40.6%;
larity 51.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                    MATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             zona_pellucida;
AA; 50084 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                 K.E.;
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                                                                                           Score 132; DB 6; L
Pred. No. 2.57e-13;
6; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 151; DB 13;
Pred. No. 8.72e-18;
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Last sequence up
Last annotation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL.

ZONA PELLUCIDA (
57E58E90 CRC3:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
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                                                                                                                                                                                                                    CRC32
                                                                                                                                                                                                                                                                                                                                                                     pellucida 3 cDNA
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ea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC32;
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                                                                                                                                                    Length 422;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 460;
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Xenopodinae;
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RESULT PROPERTY OF THE PROPERT
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073670;
01-AUG-1998
01-AUG-1998
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01-JUL-1997
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01-MAY-1997
01-MAY-1997
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Submitted (MAR-1998) to the EMBL/(
EMBL; AB012506; BAA25637.1; -
PFAM; PF00100; Zona_pellucida; 1.
PRINTS; PR00023; ZPELLUCIDA.
                                                                                                                                                                                                01-JUL-1997 (TrEMBLrel. 04, Created)
01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
01-NOV-1998 (TrEMBLrel. 08, Last annotation update)
LIPA TRANSCRIPTIONAL ACTIVATOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "TAKEUCHI Y., NISHIMURA K., ADACHI T., AOKI N., "ISOLATION and CDNA Cloning of chichen zpc."; Submitted (NOV-196) to the EMBL/GenBank/DDBJ dEMBL; D89097; BAA13760.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QUAII ZPC.
Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Archosau
Eukaryota; Metazoa; Chordata; Craniata; Phasianinae; Coturnix.
                                                                                            Streptomyces sp.
Bacteria; Firmicutes; Actinobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PFAM; PF00100; zona_pellucida; 1. PRINTS; PR00023; ZPELLUCIDA.
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TAKEUCHI Y., NISHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gallus gallus (Chicken).
Eukaryota: Metazoa: Chordata: Craniata:
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   SEQUENCE FROM N.A
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                                                                Actinomycetales; Streptomycineae;
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Local Similarity 42.9%;
les 12; Conservative
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12; Conse
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(TrEMBLrel. 03,
(TrEMBLrel. 12,
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larity 42.9%;
Conservative
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Pred. No. 2.
7; Mismatc
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EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
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                                                                Streptomycetaceae;
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                                   Phasianinae; Gallus.
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1.93e-11;
1.93e-9;
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IT 01-NOV-1998 (TREMBLEGL 08)

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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-M11;
MEDIJAN; 93138418.
PERREZ C., JUAREZ K., GARCIA-CASTELLS E
SERVIN-GONZALEZ L.;
"Cloning, characterization, and expres
of an extracellular lipase-encoding ge
Gene 123:109-114(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           091984
091984;
01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 08,
01-NOV-1998 (TrEMBLrel. 08,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Carassius auratus (Goldfish).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Actinopterygi
Neopterygii; Teleostei; Euteleostei; Ostariophysi; Cypriniformes;
Cyprinoidea; Cyprinidae; Cyprininae; Carassius.
Cyprinus carpio (Common carp).
Eukaryota; Metazoa; Chordata; Crania:
Neopterygii; Teleostei; Buteleostei;
Cyprinoidea; Cyprinidae; Cyprininae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHANG Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SERVIN-GONZALEZ L.;
Submilted (APR-1997) to the EMBL/GenBank/DDBJ databases
EMBL; M86351; AAS51446.1;
PFAM; PF00196; GerE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted
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                                                                                                                                                                                                                                                                                                                                                      379 GWLAADGNHQVCGCCD-STCASP 400
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                                                                                                                                                                                                                                                                                                          SWFPVQGPADICQCCNKGDCGTP
                                                                                                                                                                                                                                                                                                                                                                                               h 25.2%; similarity 30.4%; 7; Conservative
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Similarity 29.7%;
11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WANG S., TE
(APR-1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100; zona_pellucida;
428 AA; 46651 MW;
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5) to
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  to the EMBL/GenBank/DDBJ 38.1;
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01,
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Pred. No. :
13; Mismat
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EMBL/GenBank/DDBJ
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encoding gene from Streptomyces sp. M11.";
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                  Craniata; Vertebrata;
eostei; Ostariophysi; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
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59861E52 CRC32;
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  Cyprinus
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2.13e-03;
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1.26e-02;
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                         Cypriniformes;
                                           Actinopterygii;
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Best Local
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                                                                                                                                                                                                                                                                          JLT 12
Q92017
Q92017;
Q92017;
01-NOV-1996
01-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=OVARY;
CHANG Y., WANI
Submitted (AP
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O90357 PRELIMINARY; PRT; 4:
O90357; O90357;
O1-NOV-1996 (TrEMBLrel. 01, Created)
O1-NOV-1996 (TREMBLrel. 08, Last annott
O1-NOV-1998 (TREMBLrel. 08, Last annott
O1-NOV-1998 (TREMBLrel. 07, Last Seque)
O1-NOV-1998 (TREMBLR).
SEQUENCE FROM N.A. CHANG Y.S., WANG S.C.,
                                                               SEQUENCE FROM N.A. CHANG Y., WANG S., T Submitted (MAR-1995)
                                                                                                                                           Cyprinus carpio (Common carp).
Eukaryota; Metazoa; Chordata; Crania!
Neopterygii; Teleostei; Etteleostei;
Cyprinoidea; Cyprinidae; Cyprininae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cyprinus carpio (Common carp).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Neopterygii; Teleostei; Euteleostei; Ostariophysi; C
Cyprinoidea; Cyprinidae; Cyprininae; Cyprinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
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                                                                                                                                                                                                                                                           ZP3 GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON_TER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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SEQUENCE FROM
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Local Similarity 30.6%;
hes 11; Conservative
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:|:::| : | ||:: || |: || ||
SWFPVQGPADICQCCNKGDCGTPSHSRRQPHYMSQW 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PF00100; zona_pellucida; 1.
ER 1 1
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Similarity 30.6%;
11; Conservation
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95) to
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5) to
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  TSAO
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the
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Pred. No.
9; Misma
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Last sequence update)
Last annotation updat
                                                             HUANG F.;
EMBL/GenBank/DDBJ
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EMBL/GenBank/DDBJ
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Last annotation updat
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EMBL/GenBank/DDBJ
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EMBL/GenBank/DDBJ
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  .c.,
                                                                                                                                           Craniata; Vertebrata; eostei; Ostariophysi; (ininae; Cyprinus.
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EF15E170 CRC32;
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d. No. 3.03e-02;
Mismatches 14;
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  HUANG
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1.96e-02;
  F.L.;
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Best Local S
Matches 1
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Submitted (APR-1995) to the EMBL/Ge:
EMBL; Z48972; CAA88836.1; -
EMBL; L41638; AAB41821.1; -
PFAM; PF00100; zona_pellucida; 1.
NON_TER 1 1
SEQUENCE 424 AA; 46326 MW; F1E4
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Q92027;
Q92027;
Q1-NOV-1996
Q1-NOV-1998
SEQUENCE FROM N.A.
STRAIN-BRISTOL N2.
MEDLINE; 94150718.
MEDLINE; 94150718.
MILSON R., ALNSCOUGH R., ANDERSON K., BAYNES C., BERKS M.,
COPSEY T., COOPER J.,
BONFIELD J., BURTON J., CONNELL M., COPSEY T., COOPER J.,
CRAXTON M., DEAR S., DU Z., DURBIN R., FAVELLO A., FULTON
GARDNER A., GREEN P., HAWKINS T., HILLER L., JIER M., JOH
JONES M., KERSHAW J., KIRSTEN J., LAISTER N., LATREILLE P.
LIGHTNING J., LLOYD C., MCMURRAY A., MORTIMORE B., O'CALLAN
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CHANG Y., WNA
Submitted (AP
                                                                                                                                                                                                                                                                                                                                             Caenorhabditis elegans.
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (APR-1995) to the EMBL; 248799; CAA88736.1; -EMBL; 141637; AAB41820.1; -PFAM; PF00100; zona_pelluci SEQUENCE 419 AA; 45763 M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cyprinus carbio (Common carp).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Actinopterygii;
Neopterygii Teleostei; Euteleostei; Ostariophysi; Cypriniformes;
Cyprinoidea; Cyprinidae; Cyprininae; Cyprinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          T02B11.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         368 GWLAADGNHQVCSCCD-STCGLDGGIAASPSGGVQW 402
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Similarity 27.8%;
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Similarity 30.6%;
11; Conservative
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(APR-1995)
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01, Last sequence up
08, Last annotation
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Pred. No.
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Pred.
9; M
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Last annotation updat
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EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HUANG F.;
EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F1E44C2F CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.
D6713C90 CRC32;
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                                                                      JOHNSTON L.,
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PARSONS J., PERCY C., RIFKEN L., ROOPRA A., SAUNDERS D., SHOWNKEEN R., SMALDON N., SMITH A., SONNHAMMER E., STADEN R., SULSTON J., THIERRY-MIEG J., THOMAS K., VAUDIN M., VAUGHAN K., WATERSTON R., WATSON A., WEINSTOCK L., WILKINSON-SPROAT J., WOHLDMAN P.;
"2.2 Mb of contiguous nucleotide sequence from chromosome III of C.

SEQUENCE FROM N.A. STRAIN-BRISTOL N2;

elegans

Wature 368:32-38(1994).

Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.

SEQUENCE FROM N.A.

Query Match Best Local S Matches

y Match 23.1%; Local Similarity 46.7%; nes 7; Conservative

Score 75; DB 5; I Pred. No. 2.54e-01; 5; Mismatches

Length 295 3; Indels

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Gaps

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STRAIN-BRISTOL N2;
WATERSTON R.;
Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; AF022979; AAB69903.1;
SEQUENCE 295 AA; 34613 MW; B7BEDA4B CRC32;

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Matches 1
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"A set of ordered cosmids and a detailed genetic and physical map for the 8 Mb Streptomyces coelicolor A3(2) chromosome.";

the 8 Mb Streptomyces coelicolor A3(2) chromosome.";

Mol. Microbiol. 21:77-96(1996).

EMBL; AL078618; CAB44525 1; -.

EMBL; AL078618; CAB44525 1; -.

SEQUENCE 843 AA; 88861 MW; 53EF1405 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O9XARO PRELIMINARY; PRT; 843 AA.
O9XARO;
O1-NOV-1999 (TrEMBLrel. 12, Created)
O1-NOV-1999 (TrEMBLrel. 12, Last sequence update)
O1-NOV-1999 (TrEMBLrel. 12, Last annotation update)
NUOG, NADH DEHYDROGENASE SUBUNIT.
                                                                                                                                                                                                                                                        STRAIN=A3(2);
MEDLINE; 97000351.
                                                                                                                                                                                                                                                                                                                            STRAIN-A3(2);
BENTLEY S.D., PARKHILL J., BARRELL B.G., RAJANDREAM M.A.;
Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                 "A set of ordered cosmids and a detailed genetic and physical map for the 8 Mb Streptomyces coelicolor A3(2) chromosome."; submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Streptomyces coelicolor.

Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetales; Streptomycineae; Streptomycetaceae; Streptomyces.
                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-A3(2);
                            236 FDLISSPSVCEHCS-GGCATRIDHRR-GKVM 264
                                                                                                                                                                                                                                                                                          EQUENCE FROM N.A.
                                                               y Match 23.1%;
Local Similarity 32.3%;
nes 10; Conservative
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| | ||::: || ||::
3 FPVQGPADICQCCNK 17
3 FPVQGPADICQCCNKGDCGTPSHSRRQPHVM 33
                                                               Score 75; DB 2; Length 843; Pred. No. 2.54e-01; 9; Mismatches 10; Indels
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Search completed: Fri Apr 28 14:25:46 2000 Job time: 81 secs.

